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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,701	07/18/2005	Kenjiro Hamanaka	2986-0133PUS1	9087
2292	7590	03/15/2007	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			DOAN, JENNIFER	
			ART UNIT	PAPER NUMBER
			2874	
SHORTENED STATUTORY PERIOD OF RESPONSE		NOTIFICATION DATE	DELIVERY MODE	
3 MONTHS		03/15/2007	ELECTRONIC	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 03/15/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

[mailroom@bskb.com](mailto:mailroom@bskb.com)

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/517,701	HAMANAKA ET AL.
	Examiner	Art Unit
	Jennifer Doan	2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 11 December 2006.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-15 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 18 July 2005 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date. _____   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

Applicants' amendment filed on December 11, 2006 has been considered and entered.

The arguments advanced therein, considered together with the amendment made to the claims, are not persuasive. In view of scrutiny of the claims, it is discovered that the rejection based on the Fumio (JP 08-101324) and Neilson et al. (U.S. 6,757,458) references is still pertinent to the claims. Therefore, the previous rejection is maintained. This action is made final.

### ***Specification***

1. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Fumio (JP 08-101324).

With respect to claim 1, Fumio (figure 4b) discloses an optical device unit in which light exiting from a first optical fiber (5a) is converged by a lens (2a) to travel toward a reflection-type optical element (40), part of or all of the light exiting from the first optical fiber (5a) is reflected by the reflection-type optical element (40) and is converged by the lens to be coupled to a second optical fiber (5d), wherein the lens of the optical device unit is constituted by a first and second lenses (2a, 2d) adapted to the corresponding optical fibers (5a, 5d); the distance between the optical axes of the first and second optical fibers (5a, 5d) is larger than a distance between optical axis centers of the first and second lenses (2a, 2d); a light exit end of the first optical fiber (5a), the optical axis center of the first lens (2a) and a reflection point on the reflection-type optical element (40) are placed in line (see figure 4b); and the reflection point on the reflection-type optical element, the optical axis center of the second lens (2d) and the entrance end of the second optical fiber (5d) are placed in line (see figure 4b).

With respect to claims 2 and 9, Fumio (figure 4b) discloses the optical device unit, wherein the optical fibers are multimode optical fibers; the light exit end of the first optical fiber (5a) and the reflection point on the reflection-type optical element (40) are in a geometric-optical conjugate relationship with each other; and the light entrance end of the second optical fiber (5d) and the reflection point on the reflection-type optical element (40) are also in a geometric-optical conjugate relationship with each other (see figure 4b).

With respect to claims 3 and 10, Fumio discloses the optical device unit, wherein the optical fibers are single mode optical fibers, and a beam waist of a Gaussian beam

is formed at each of the light exit end of the first optical fiber, the reflection point on the reflection-type optical element and the light entrance end of the second optical fiber (see paragraph [0006]).

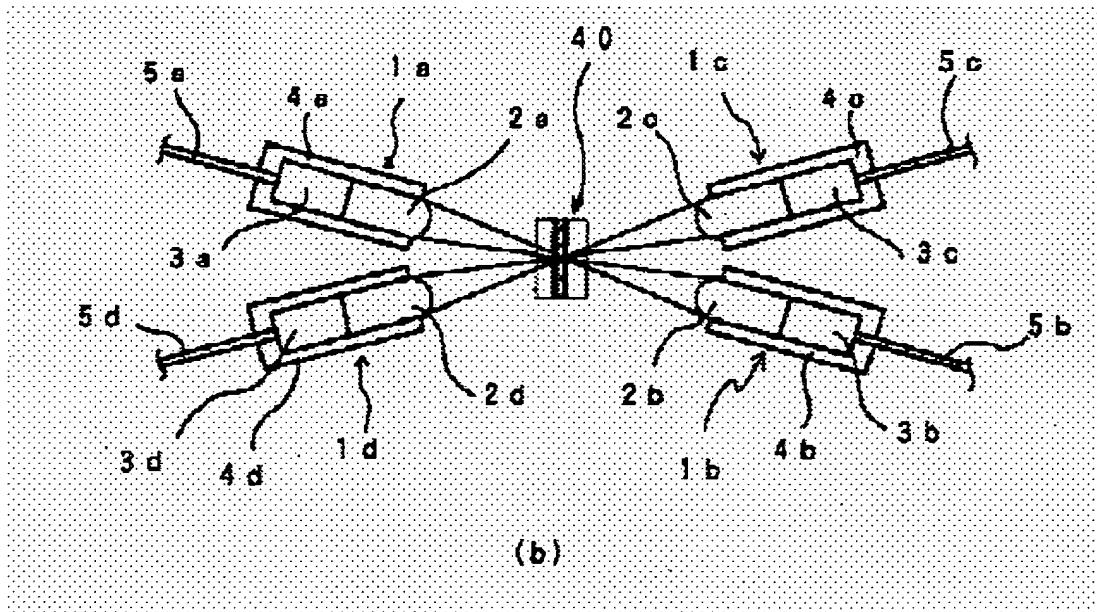
With respect to claims 4, 5, 11 and 12, Fumio discloses the optical device unit, wherein the lens has means for correcting abaxial aberration and the means for correcting abaxial aberration has such a shape as to change the optical power along two axes of the lens perpendicular to each other (see paragraph [0005]).

With respect to claims 6 and 13, Fumio (figures 4a, 4b) discloses the optical device unit, wherein the reflection type optical element is a demultiplexing filter or a reflection element such as a liquid crystal shutter (40, 41).

With respect to claims 7 and 14, Fumio discloses the optical device unit, wherein a plurality of the optical device units are arranged linearly or two-dimensionally one adjacent to another (see figure 4b).

With respect to claim 8, Fumio (figure 4b) discloses an optical device unit in which an optical fiber (5a) for exit and an optical fiber (5d) for entrance are placed in a pair on at least one of left and right sides of a semitransparent optical element (40) opposite; light exiting from the optical fiber (5a) for exit on one of the left and right sides is converged by lens means; and the converged light is caused to pass through the semitransparent optical element (40) or reflected by the semitransparent optical element (40) to selectively be coupled to the left and right optical fibers for entrance, wherein the lens means of the optical device unit is constituted by a pair of lenses (2a, 2d) adapted to the pair of optical fibers (5a, 5d) for exit and entrance; a distance between the optical

axes of the pair of optical fibers (5a, 5d) for exit and entrance; a distance between the optical axis centers of the pair of lenses (2a, 2d); and a light exit end or the light entrance end of each optical fiber, an optical axis center of the lens corresponding to each optical fiber and the transmission point or the reflection point on the semitransparent optical element (40) are placed in line (see figure 4b).



#### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claim 15 is rejected under 35 U.S.C. 102(e) as being anticipated by Neilson et al. (U.S. 6,757,458).

With respect to claim 15, Neilson et al. (figure 5) disclose a microlens array (505) having a plurality of lens portions formed on a surface of a transparent substrate, wherein the microlens array (505) includes two lenses in the lens portions forming a pair, and the lenses forming the pair have such shapes that the lenses are cut along a bisector perpendicular to a line connecting centers of the lenses in a direction substantially parallel to an optical axis, and cut portions are brought into abutment on each other (see figure 5).

### ***Response to Arguments***

9. Applicants' argument filed on December 11, 2006 has been fully considered.

10. With respect to claims 1 and 8, the applicants argue that elements 40 and 60 are not the reflection-type mirror.

The examiner disagrees because neither claim 1 nor claim 8 recites a reflection-type mirror.

Please refer to claim rejection 35 U.S.C. 102 above for claims 1 and 8.

With respect to claim 15, the examiner also submits that Neilson et al. clearly teach all the features of claim 15 (please refer to claim rejection 35 U.S.C. 102 above).

### ***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Doan whose telephone number is (571) 272-2346. The examiner can normally be reached on Monday to Thursday from 6:00am to 3:30pm, second Friday off.

13. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

14. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JD

March 2, 2007

*Jennifer Doan*  
JENNIFER DOAN  
PRIMARY EXAMINER